Maintenance
Accountability
Process

Field Data Collection Manual

MAY 2009

Maintenance and Operations Division
Maintenance Office

Washington State
Department of Transportation

Maintenance Accountability Process
Field Data Collection Manual

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I – INTRODUCTION

An important part of the Maintenance Accountability Process (MAP) is regular field condition surveys conducted on the highway system. The surveys assess the maintenance service levels that exist at a given point in time. The purpose of this manual is to document the procedures for consistent data collection on paved shoulders, drainage, roadside, traffic items and bridges.

Data Collection Procedures

1. Statistical methods are used to identify approximately 2,200 randomly selected data survey sites around the state. These are 0.10 mile sections (528 feet) selected from the approximately 7,000-centerline miles of state highway inventory.

2. Each region will have two dedicated MAP survey teams, two persons per team. Each region will also have two identified alternate surveyors to fill in if one regular member is unavailable. These teams will be region wide teams, under regional direction rather than under the direction of an area or section. One member of each team will be a licensed applicator for weed identification purposes. The teams will **not** conduct surveys in their regularly assigned area. Personal Digital Assistant's (PDA's) will be used for data collection. Prepare the PDA and download survey sites.

3. Prior to conducting surveys, review the Pre Activity Safety Plan for MAP surveys. Ensure that all appropriate personal protective equipment and traffic control devices are available. Determine what the individual site may require before beginning each survey.

4. Using Milepost Markers and the vehicle's DMI, locate and mark the start and end points for each site. Mark the points with paint at the edge of the shoulder so that they can be located again if needed. Sites are always in the increasing direction from the starting milepost. For example: site location is 43.2. Survey site is from 43.2 to 43.3.

5. If any portion of the site falls on a **structure**, the site is to be moved forward or backward to the next tenth of a mile as necessary to avoid the structure.

6. Sites in construction zones will **not** be evaluated. Relocate the site outside of the construction area but as close to the original site as possible, using an even tenth-mile section.

7. Sites located in areas not funded by WSDOT shall not be evaluated. Should a site fall inside city limits, measure only activities funded by WSDOT or move the site.

8. Activate flashing lights on vehicle, place cones for safety and use appropriate traffic control measures. Always wear required safety equipment, reflective vest, supportive footwear, etc.

9. Conduct field measurements and observations at the sites and record the data. When performing data collection always try to walk facing traffic. On divided highways and freeways it may be necessary to drive around to the lanes in the opposite direction and set points on that side of the road as well. Remember **SAFETY FIRST**.

General Comments

Beginning with the fall 2006 survey, pavement deficiencies were no longer collected in the traveled lane with MAP surveys. This data is now collected through WSPMS.

Beginning in 2008, Bridge Deck data (MAP Activity 4A1) was no longer collected on the Bridge Survey. This data will come from the bridge inspections done through the Bridge Preservation Office.

Cumulative Deficiencies
Shoulder pavement deficiencies are cumulative. Where one type of deficiency is found within the area of a second type of deficiency, both deficiencies are counted independently. For example, a 25 sq. ft. area of alligator cracking may contain a 2 sq. ft. pothole. Do not subtract the 2 sq. ft. of pothole from the 25 sq. ft. of alligator cracking.

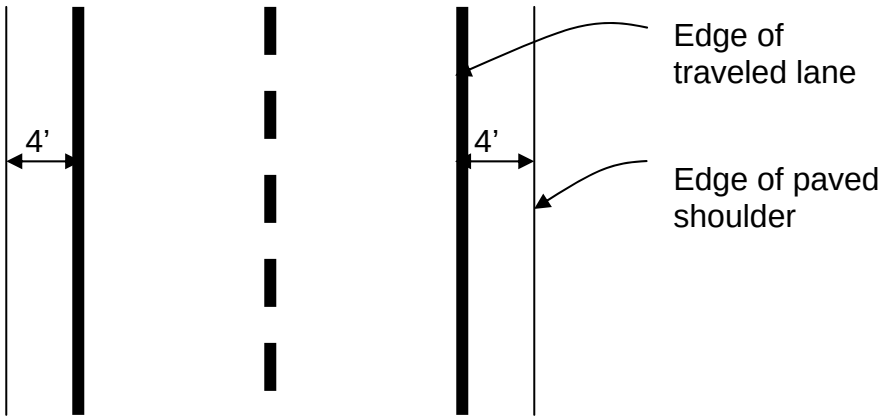
Edge lines
For the purposes of MAP field data collection**, the edge line is considered part of the paved shoulder**. Deficiencies occurring on the edge line are deficiencies of the paved shoulder.

Funding and Maintaining – The purpose of MAP is to measure the level of service provided by WSDOT personnel using funds allocated by the legislature. If the funding for maintenance activities comes from cities, counties, parks, etc., **do not measure.** If you are unsure, discuss with the supervisor prior to conducting surveys.

Beginning in 2009, field data collection will be performed exclusively using PDA's. The program can be downloaded from M&O's Maintenance Management and data collection page at http://midtierrd2.wsdot.wa.gov/ceload.htm. Bridge data will continue using GoMAP (an FMPro application) for 2009. Questions or comments about this should be directed to Anna Zaharris at 360-705-7813 or zaharra@wsdot.wa.gov.

II - PAVED SHOULDERS

General: Record total combined width of paved shoulders for the site. Paved shoulder is defined as going from the inside of the edge line to the outer edge of the existing pavement. **The edge line is considered part of the paved shoulder.**



Example: 8’ total width

A. SHOULDER POTHOLES

Units of Measure: Total square feet of shoulder potholes per 0.10-mile section.

Threshold: Minimum size **-** (36 sq. in. x 1 in depth) or larger

Methodology: Calculate the total **square feet** for all potholes within the paved shoulder. Potholes smaller than the minimum size (36 sq inches x 1 in) are not counted as potholes.

B. SHOULDER ALLIGATOR CRACKING

Shoulder Alligator Cracking

Unit of Measure: Total square feet of alligator cracking within the paved shoulder area, per 0.10-mile section.

Threshold: All unsealed shoulder alligator cracking.

Methodology: Calculate the total square feet for all unsealed alligator cracking in the paved shoulder. Use the average width of cracking to calculate square feet.

C. SHOULDER LONGITUDINAL CRACKING

Unit of Measure: Total linear feet of cracking within paved shoulder area, per 0.10-mile section.

Threshold: All unsealed longitudinal cracking - cracking running generally parallel to the fog line striping.

Methodology: Measure and record linear feet of all unsealed longitudinal cracking within the paved shoulder area. Sealed cracks are not counted as a deficiency.

Comments: Unsealed panel and expansion joints in concrete pavement are not considered deficiencies for this survey. Where asphalt is overlayed on concrete pavement unsealed cracks in the asphalt pavement shall be counted as a deficiency.

D. SHOULDER TRANSVERSE CRACKING

Unit of Measure: Total linear feet of cracking within the paved shoulder area, per 0.10-mile section.

Threshold: All unsealed transverse cracking - cracking running generally perpendicular to the fog line striping.

Methodology: Measure and record linear feet of all unsealed transverse cracking within the paved shoulder area. Sealed cracks are not counted as a deficiency.

Comments: Unsealed panel and expansion joints in concrete pavement are not considered deficiencies for this survey. Where asphalt is overlayed on concrete pavement unsealed cracks in the asphalt pavement shall be counted as a deficiency.

E. SHOULDER EDGE RAVELING

Unit of Measure: Total linear feet of edge raveling, per 0.10-mile section.

Threshold: Count all shoulder areas where paving material is breaking off into pieces (raveling) or is missing along the edge of paved shoulder.

Methodology: Measure and record total linear feet of all edge raveling within shoulder area. All edge raveling is assumed to be 1 foot in width.

Comments: Count only areas where material is actually breaking off (raveling) or missing from the shoulder. Areas that show alligator cracking but are intact will be counted as alligator cracking.

F. SHOULDER EDGE DROP-OFF

Unit of Measure: Total linear feet of shoulder drop-off, per 0.10-mile section.

Threshold: All shoulder edge drop-off 2 vertical inches or greater.

Methodology: Measure and record linear feet of all shoulder edge drop-off 2 vertical inches or greater that occurs within the section. Shoulder drop-off less than 2 inches is not counted.

Comments: In some cases the paved shoulder has been intentionally beveled to produce a gentle transition to the gravel shoulder. A beveled edge is not considered a deficiency. In some case, the shoulder drops off immediately from pavement edge down to ditch bottom or down slope and no shoulder can be built up at the edge of pavement. This will not be considered a deficiency. Also, drop off by design (contract paving does not extend out to edge of existing pavement) will not be counted as a deficiency.

G. Shoulder Edge Buildup

Unit of Measure: Total linear feet of buildup of sand, dirt and/or vegetation at the edge of pavement, per 0.10-mile section

Threshold: All shoulder buildup greater than **two** vertical inches.

Methodology: Measure and record linear feet of all shoulder buildup **two** vertical inches or greater, occurring at the edge of pavement within the survey section, including areas under guardrail.

Comments: Shoulder buildup less than **two** vertical inches is not considered a deficiency.

H. SHOULDER SWEEPING / CLEANING

Unit of Measure: Total **linear feet** of shoulder debris, per 0.10-mile section. Average width of shoulder debris, per 0.10-mile section

Threshold: All paved shoulder areas that contain debris or require sweeping/cleaning.

Methodology: Measure and record linear feet of shoulder debris. Measure and record the average width of shoulder debris.

I. SHOULDER HUMPS, SAGS, SETTLEMENTS and OTHER

Humps and Sags

Delamination

Description: Localized depressions or elevated areas of the paved shoulder that result from settlement, frost heave, pavement shoving, subgrade swelling, or other displacement due to tree roots, utility line installation, etc. This item also includes delamination and any other deficiencies that do not fit in another category.

Unit of Measure: Total **square feet** within the paved shoulder areas, per 0.10-mile section.

Threshold: Humps, Sags and Settlements: Localized depressions or elevated areas within the paved shoulder areas. This is defined as a **vertical deviation of 2 inches or greater** at the time of the survey.

Delamination: must total a minimum of 36 sq. in.

Other deficiencies: include unique deficiencies that do not fit in another category.

Methodology: Calculate the total **square feet** for humps, sags, settlements and other deficiencies located within the paved shoulder areas.

III – DRAINAGE

A. DITCHES

Units of Measure: Total linear feet of ditch, per 0.10-mile section**.** Total linear feet of filled ditch, per 0.10-mile section.

Threshold: Count as deficient all ditches that are 50% or more full.

Methodology: Measure all ditches within the section and record the total linear feet of ditches. Measure and record the linear feet of ditch that is 50% or more full of sediment or other material.

For purposes of this survey, to be considered a ditch the following conditions must exist:

1. Must be designed and constructed to carry water - not a natural swale, or
2. Must be maintained as a ditch by Maintenance.

Comments: Streams adjacent to the roadway are not considered ditches. Standing water (tidal or non-tidal) in ditches is not a deficiency. Vegetation growing in the ditch is not a deficiency. Ditches functioning solely to capture rock fall shall not be considered a ditch for this survey.

B. CULVERTS

Unit of Measure:

Total number of culverts, per 0.10-mile section.
Total number of culverts greater than or equal to 50% filled or otherwise deficient, per 0.10-mile section.

Threshold:

Count as deficient if:

1. Any portion of the culvert is 50% or more filled with sediment or debris, or
2. Any end is significantly crushed or deformed, or
3. The volume of the inflow or outflow is reduced 50% or more by obstructions such as rocks, vegetation, or woody debris, or
4. The pipe is separated 1inch or more, or damaged in a way that the function of the culvert is causing significant damage to the roadway prism or adjacent drainage channel.

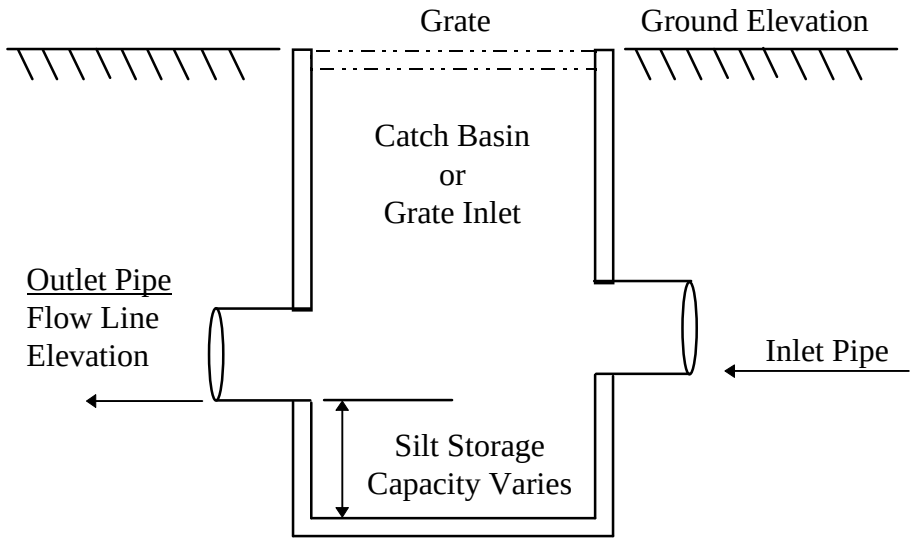
Methodology:

Count and record all culverts within the section. Count and record any culvert that is 50% or greater filled or otherwise deficient. **Evaluate only those culverts that cross state highways or county roads at their intersection with state highways.** ***Do not count culverts under private access roads.***

Comments:

Vegetation obscuring the end of a culvert is not a deficiency unless it obstructs the flow of water. Standing water (tidal or non-tidal) in culverts is not a deficiency. Culverts designed to be half filled with gravel for fish habitat should not be rated as deficient.

C. CATCH BASINS AND INLETS



Units of Measure: Total number of catch basins and drain inlets, per 0.10-mile section. Total number of catch basins and drain inlets that are deficient.

Threshold: Count as deficient any catch basin or drain inlet that has:

1. 50% or more of the inlet grate blocked with debris, or
2. The catch basin has sediment buildup that reaches or exceeds the flow line elevation of the outlet pipe, or
3. Structure outfall is 50% blocked or more.

Methodology: Count and record the total number of catch basins and drain inlets in the section. Count and record the number of catch basins and drain inlets blocked by debris, catch basins filled with sediment or outfall blocked by debris or sediment.

Comments: Both catch basins and drain inlets are rated for blockage of the inlet grate or the outfall. Only catch basins are rated for sediment build-up. A flashlight and/or probe may be needed to determine if the structure is a catch basin (i.e., has silt storage capacity) and whether it is deficient due to sediment buildup or outfall blockage.

D. SLOPE FAILURES

Unit of Measure: Presence or absence of slope failure in a 0.10-mile section.

Threshold: **ONLY** count as deficient a slide or erosion that is **at the time of the inspection:**

1. Jeopardizing the structural integrity of the paved shoulder or traveled lane(s), or
2. Blocking the paved shoulder or traveled lane(s), or blocking the ditch, or
3. Jeopardizing the structural integrity of guardrail or traffic signs.

Traffic may move slower through the area or lanes may be reduced, causing intermittent stoppages. Erosion or slides not meeting the thresholds above shall not be considered deficient.

Methodology: Determine the presence or absence of slope failures within the survey section. Both fill and cut slopes can be affected.

Comments: Chronic or ongoing slope failures that do not meet the criteria listed above at the time of the survey are not to be counted as failures.

Edge drop-off is not considered a slope failure.

IV - ROADSIDE

General: Record the total combined width of right of way/roadside. If width of roadside varies use the combined averaged width for the section. Unpaved median areas are considered as roadside and would be added into the width, if present. If in doubt about where the right of way line is, contact the local shed.

A. NOXIOUS WEEDS

Weed Infestation

Units of Measure: Total square feet of infestation, per 0.10-mile section**.**

Threshold: Presence of legally designated noxious weeds **(dead or alive)** on the roadside.

Methodology: Survey the entire roadside area and determine the presence of any legally designated noxious weeds, **dead or alive**. Measure the square feet of the infestation. **The total square feet of infestation shall not exceed the total square feet of roadside**.

Comments: For noxious weed lists, refer to the regional Weed Identification Guide put out by IVM staff, and region/area IVM plans located at http://www.wsdot.wa.gov/maintenance/vegetation/mgmt_plans.htm.

Identifying noxious weeds can be difficult and is to be done by a person trained in weed identification.

B. NUISANCE VEGETATION

Weed Infestation

Weed Infestation

Units of Measure: Total square feet of infestation, within the entire roadside, per 0.10-mile section**.**

Threshold: Presence of nuisance vegetation **(dead or alive) on the roadside.**

Methodology: Survey the entire roadside area and determine the presence of any nuisance vegetation **(dead or alive)**. Measure the square feet of the infestation. **The total square feet of infestation shall not exceed the total square feet roadside area.**

Comments: A nuisance weed is defined as those species listed as Class B and C on the state noxious weed list, but not selected for mandatory control within an individual county. Refer to the region/area IVM plan and the regional Weed ID booklets put out by IVM staff.

Identifying nuisance vegetation can be difficult and is to be done by a person trained in weed identification.

C. VEGETATION OBSTRUCTIONS

Vegetation Obstruction

Unit of Measure: Presence or absence of vegetation obstructions in 0.10 mile section.

Threshold: Vegetation blocking sight distance to guide or regulatory signs, or intersections as seen from the driver's perspective.

Methodology: Measure and record the presence or absence of vegetation obstructing sight distance to signs or intersections.

Comments: For the purpose of judging adequate site distance for this survey, signs and intersections should be visible from distances of:

Freeways	800 feet min.
Rural roads	500 feet min.
Urban roads	200 feet min.

D. LITTER

Unit of Measure: Total number of litter counted, per 0.10-mile section.

Threshold: Objects approximately 4 in. x 4 in. or larger.

Methodology: Observe and record all litter 4 in. x 4 in. and greater.

V - TRAFFIC

A. RAISED/RECESSED PAVEMENT MARKERS

Units of Measure: Total number of raised/recessed pavement markers, per 0.10 mile section. Total number of worn or missing markers, per 0.10-mile section.

Threshold: Missing or deficient pavement markers. If the markers are missing or broken, or the reflective surface is non-functional they should be considered as deficient.

Methodology: Count and record all pavement markers that **should be present** within the section. Count and record any markers that are deficient or missing.

Methodology (cont.): In counting markers, it may be helpful to determine the number of markers associated with each pavement stripe (grouping) and then count stripes (groups) to determine the total number of markers that should be present. Markers butted end to end, can, in most cases, be considered as one marker if the normal installation would require only one marker in that location.

Comments: In many instances old markers are not removed as new markers are placed. Do not count old markers as deficient if new markers have been placed next to them.

The “bumps” on a plastic profile line are **not** to be counted as RPM’s.

The number of deficient markers will **not** exceed the number of markers that should be present.

B. PAVEMENT MARKINGS

Units of Measure: Total number of pavement markings, per 0.10-mile section. Total number of worn pavement markings, per 0.10-mile section.

Threshold: Count as deficient any pavement marking that is greater than 25% worn or worn in a way that makes it nonfunctional.

Methodology: Count and record the total number of pavement markings within the survey site. **Markings such as crosswalks and railroad crossings are counted as one pavement marking**. Stop bars are considered a separate marking.

Count and record the total number of markings that are greater than 25% worn or worn in a way that make them nonfunctional.

Do not count culvert or state patrol markings.

C. GUIDEPOSTS

Units of Measure: Total number of guideposts or fish sticks, per 0.10-mile section. Total number of broken or damaged guideposts or fish sticks, per 0.10-mile section.

Threshold: Count as deficient any guidepost or fish stick that is broken or damaged to the point that the reflectivity or functionality is impaired.

Methodology: Count and record the total number of guideposts and fish sticks within the survey section. Count and record the total number of deficient guideposts and fish sticks within the survey section.

Count only guideposts located on the mainline. Guideposts located around the radii of an at grade intersection are considered a part of the mainline. Guideposts located on ramps or locations other than the mainline are not counted.

Comments: Beginning in 2007, guidepost locations will be marked with a dot on the pavement. This dot will be maintained to allow the identification of missing guideposts.

D. GUARDRAIL

Units of Measure: Total linear feet of guardrail, per 0.10-mile section. Total linear feet of defective guardrail, per 0.10-mile section.

Threshold: Count as deficient any guardrail, including cable guardrail, which is damaged to the point that the structural integrity is compromised or the functionality is impaired. For beam guardrail, this would include broken or cracked posts, broken, cracked or misaligned blocks, missing bolts, or where the face of the rail is deformed 6 inches or greater. Also count as deficient any portion of rail that has been flattened even if it does not meet the 6 inches of deformation.

For cable guardrail, within the survey section, measure the length between supported posts as deficient. If the cable has been severed, the entire run is deficient.

Concrete barrier is counted as guardrail for the purposes of the MAP survey. To be considered deficient, concrete barrier must be out of alignment by 6 inches or more, or the barrier surface facing traffic must exhibit spalling severe enough to snag a vehicle.

Methodology: Count and record the total linear feet of guardrail within the survey section. Count and record the total linear feet of deficient guardrail within the survey section.

Comments: Count as deficient only the linear feet of damage meeting the threshold. Do not count the linear feet of guardrail that would have to be used for repair, i.e. a rail with 2 feet of damage would be reported as 2 feet of damage, even though the entire 12 foot rail will have to be replaced.

VI - BRIDGES

General: Bridge data is collected in the same time period as the field surveys. The length and width of all bridges are contained in the GoMAP database and will automatically be entered when the bridge number is entered correctly, i.e. 090/357. Use the MAP Bridge Data Collection Form to record data gathered in the field.

MAP Bridge Data Collection Form

Bridge Information

Bridge Number: SR: SRMP: Region: Area:

Taken By: Date:

Bridge Size

Bridge Length:

Bridge Width:

Bridge Cleaning

Grates and Drains

Drain_num

Drain_def_num

Decks and Sidewalks

Sq. Ft. of Sand/Debris:

Graffiti, moss, rust, etc.

% of Surface Dirty:

- ☐ None 0%
- ☐ Minor 1-10%
- ☐ Moderate 11-30%
- ☐ Major 31-50%
- ☐ Significant >50%

Instructions

When filling out the **paper form**, record the bridge number found on the bridge or on the WSDOT Bridge List. Record the state route, milepost, region, area, names of inspection team members, and date. When filling out the **computer form**, type in the bridge number (example 082/139), press enter and state route, milepost, region and bridge size will be filled in automatically.

Grates and Drains: Count and record the total number of bridge drains on the structure. Count and record the total number of blocked, plugged or covered bridge drains. Drains that are partially blocked are considered deficient. Catch basins with sediment buildup that exceeds the flow line elevation of the outlet pipe are considered deficient.

Decks and Sidewalks: Calculate and record the total square feet of sand and debris on the bridge deck and sidewalk.

Graffiti, moss, rust, etc.: Estimate and record the percent of bridge surfaces that are covered with graffiti, moss rust, bird droppings or other surface dirt.

MAP Bridge Data Form - Revised 5/2009

A. DECKS & SIDEWALKS

Unit of Measure: Total square feet of sand or debris on the bridge deck and sidewalk.

Threshold: Presence of sand or debris.

Methodology: Measure the length and determine the average width of sand and debris on the bridge deck and sidewalk. Calculate and record the total square feet for all sand and debris.

B. GRATES & DRAINS

Unit of Measure: Total number of drains on the structure. Total number of drains that are blocked.

Threshold: Blocked, plugged or covered bridge drains. Drains that are partially blocked are considered deficient. Catch basins with sediment buildup that exceeds the flow line elevation of the outlet pipe are considered a deficiency

Methodology: Count and record the total number of bridge drains on the structure. Count and record the total number of blocked, plugged or covered bridge drains. A flashlight may be needed to determine if the drain is blocked.

C. RAILS, GIRDERS, TRUSSES, PIERS & ABUTMENTS

Unit of Measure: Percent of structure covered with graffiti, moss, rust, etc.

Threshold: Check box for None, Minor, Moderate, Major or Significant severity.

None - 0% severity

Minor - 1% - 10% severity

Moderate - 11% - 30% severity

Major - 31% - 50% severity

Significant - > 50% severity

Methodology: Observe the rails, girders, trusses, piers and abutments to determine the percentage of the structure covered with graffiti, moss, bird droppings, rust or other surface dirt. Check the appropriate box on the form.

VII – MAP PDA

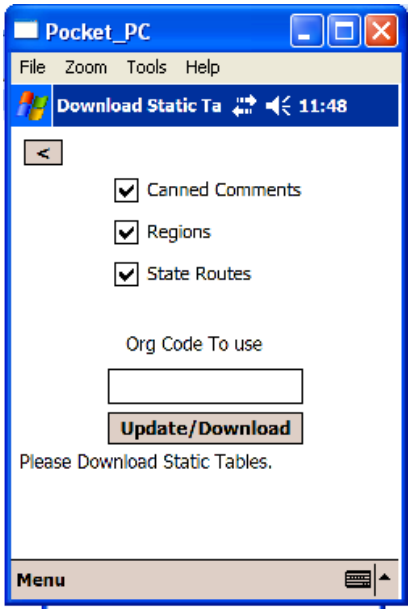
The Maintenance Accountability Process (MAP) PDA program was developed to input the information from field condition surveys conducted on the highway system. The intent is that this program will be used **while** data is collected, inputting data as the surveyor walks the site. It contains fields that will accept many entries, so no paper and pen have to be carried. It does the math, so no calculator is needed. Data is validated upon saving, catching some input errors and not allowing others, which permits the surveyor to review questionable data while still on site.

This application is unique in that two surveyors, using two PDA's, can collect data on the same site, then the data is merged at upload. Each surveyor chooses the categories (paved shoulder, drainage, etc.) they will be collecting data on. **Only one surveyor can collect data in each category.** Only the chosen categories will be available for input on each PDA.

To Begin:

A. Download Comments, Regions and SR's

With the PDA in its cradle, connected to the computer, download the MAP program from the Maintenance PDA load webpage located at http://midtierrd2.wsdot.wa.gov/ceload.htm. The first time into the program opens this page.



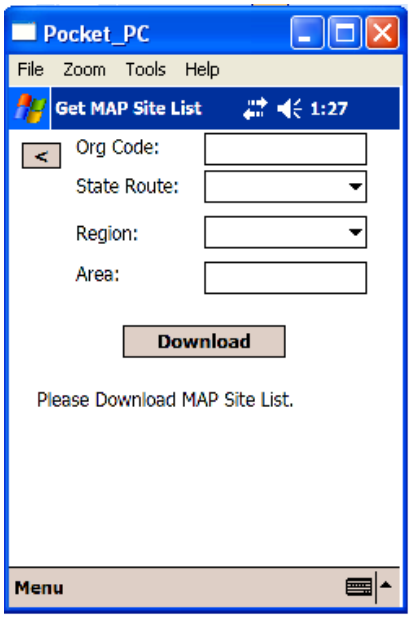
This page can also be located from Menu -> Downloads -> Initialize Static Tables, once the program set up has been completed. From here, enter an Org code to limit the Canned Comments, Regions and State Routes to a specific region, area or section; or download all by not entering an Org code. Remember, the Org code will not be **your** Org code, but the Org code of the area you will be surveying! At this time, only one Org code can be entered, so be sure of what is needed. When in doubt, download all.

Click on Update/Download to begin the download process. The message "Operation Completed Successfully" will come up when this step is done.

The next step is to get the MAP sites.

B. Get MAP Assignments:

From the Menu (bottom left hand corner), choose Downloads, and then Get MAP Assignments. The following page comes up.



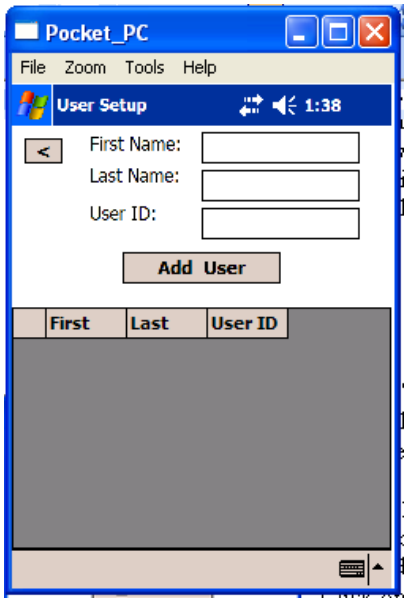
This page allows filtering of which survey sites to download. The user can choose to filter by the Org Code, State Route, Region and Area, or any combination. When the "Download" button is clicked it will download only the filtered MAP Assignments.

Once again, remember that the Org code is **not** your org code, but the Org code of the area you are surveying.

If you previously have had survey sites on the PDA that were not completed and/or uploaded, a message will pop up asking "Are you sure you want to replace the current assignments?". Choose wisely. If yes is chosen, any and all sites on the PDA will be overwritten. When this task is completed, a message will display stating "Assignments updated". Click OK. The next step is to create a login. Click on the back arrow twice, top left hand corner of the screen.

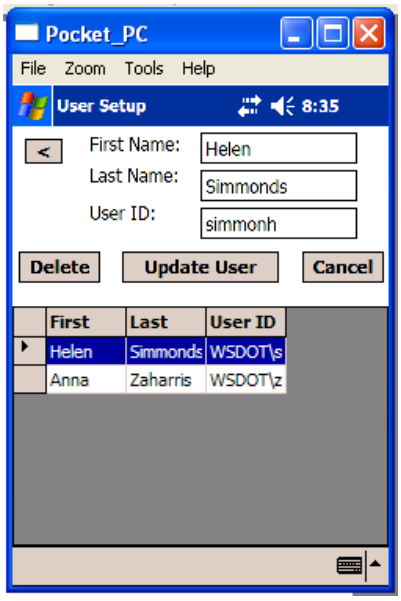
C. Logging In:

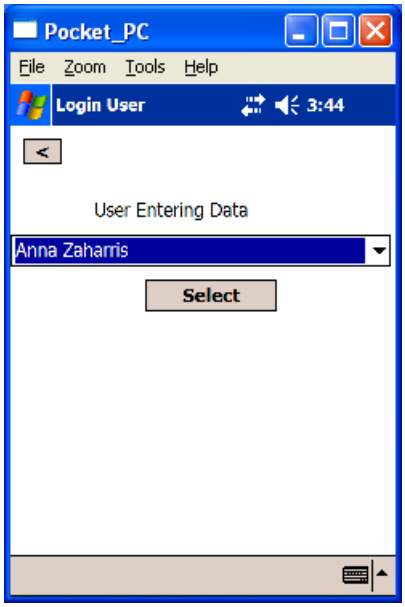
The first time a user runs the MAP PDA program they will need to create a new user to access the program and databases. This is the page that automatically comes up after initially getting sites.



The user must enter a first and last name followed by their user id. Putting the cursor in the First Name box will bring up the keyboard. Fill in the boxes and click Add User. Several users can be added on this page.

From this form the user can also edit and or delete users from the list of users. To do so, you must first select a user from the list and then the options to delete, update and cancel become visible. When delete is selected, the program will ask you to confirm your choice to delete the user.

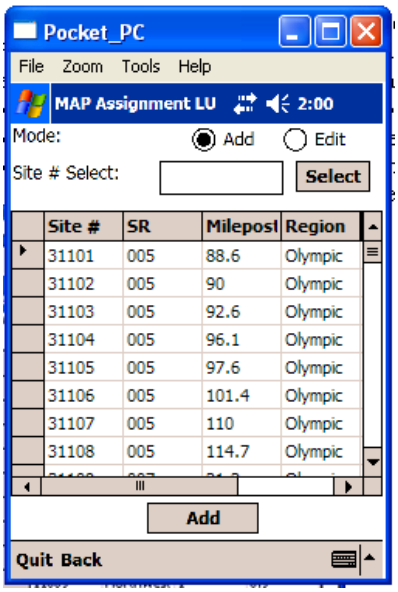


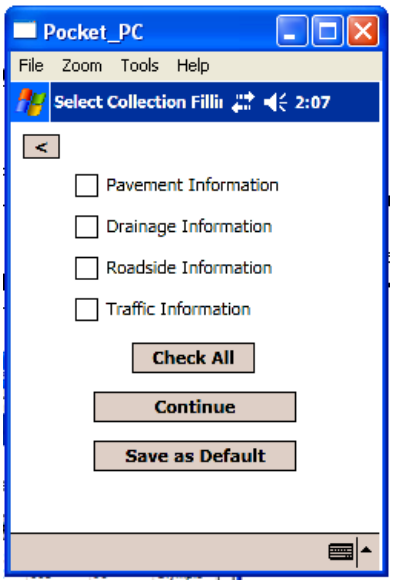


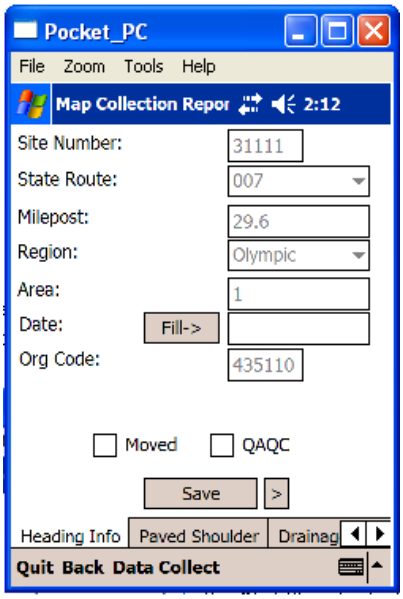
Once the users have been set up, click on the back button to choose the user entering the data and click select. A blank screen appears, with only "Menu" and "Quit" showing in the bottom left corner.

D. Data collection:

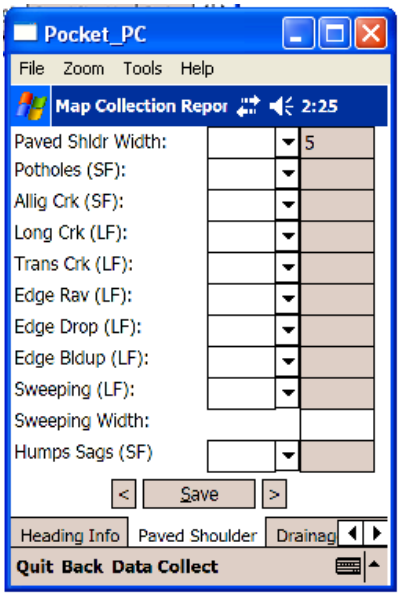
Go to Menu -> Fill In MAP Collection. The site list that was downloaded to the PDA comes up. Highlight the site you are conducting the survey on by clicking in the far left column, then click Add. **Or**, enter the site number in the Site # Select box at the top of the page, click Select, then click Add. The next page provides options for the type of data to be collected. All can be chosen or just one or two. The option exists to make whatever is chosen as a default, so the boxes will be automatically checked. Choose the appropriate items, and then click "Continue".





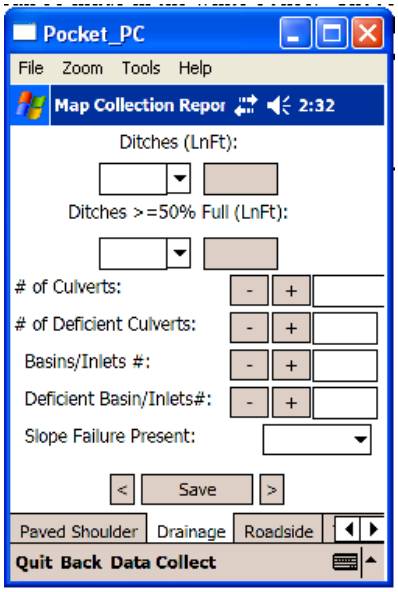


This is the header page. All assigned site info has been populated from the site list. Click on the "Fill" button and the current date is filled in. If the site has to be moved, this is where it is recorded. Click in the "Moved" box and a prompt comes up with a reminder to change the Milepost and/or SR. If the moved box is checked, the MP **must** be changed before the page can be left. Click the forward button to continue.



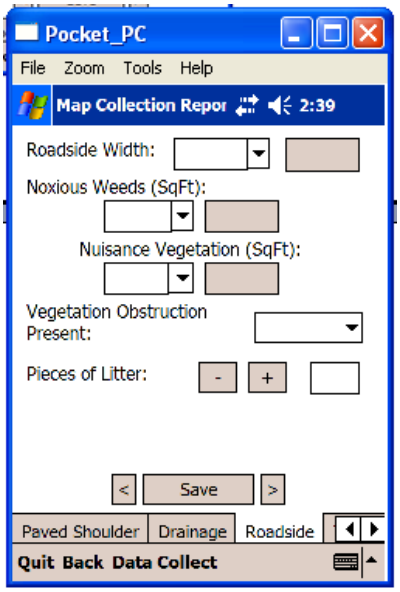
This is the pavement page. White boxes are the entry boxes, the shaded boxes are running totals. Several entries can be made in the white boxes. Choosing the down arrow between the white and shaded boxes will show all entries for that measurement and allow for corrections. This page requires an entry in the Paved Shldr width prior to moving on to another page.

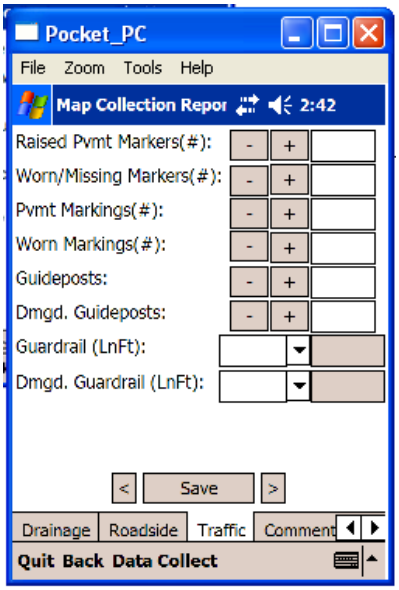
To move, click on the forward or back arrows, or choose a tab at the bottom of the page.



The drainage page contains running totals, but also gives the option of simply clicking a plus or minus to add a feature or feature deficiency.

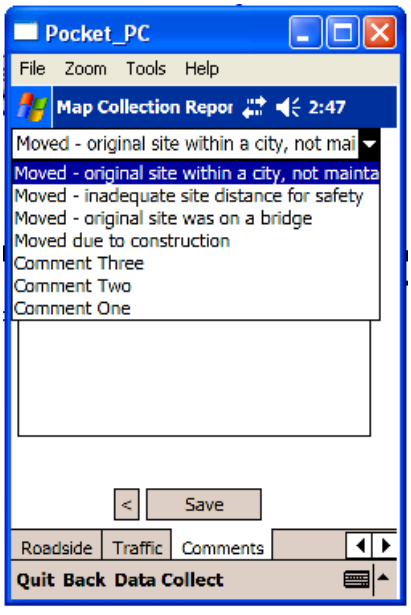
The Roadside page has running totals for the width, noxious and nuisance weeds, yes or no for veg obstruction and a clicker for counting litter.



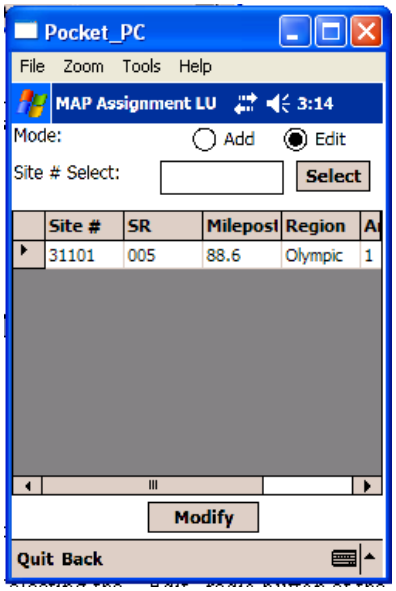


The traffic tab contains mostly clickers (plus and minus signs) for counting traffic items, still having the running total boxes for guardrail.

The comment page contains a dropdown menu with the most common reasons for moving a site. Plus any other needed comments can be added to this page. Simply put the cursor in the comment box and the keyboard opens for typing.



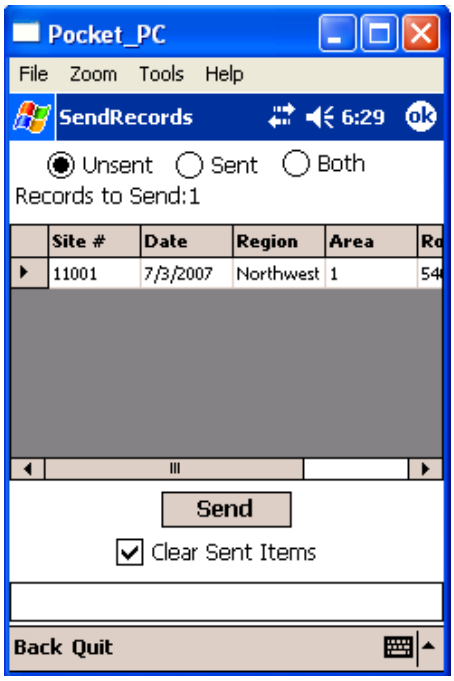
Once all the information has been entered on all the tabs, select the “Save” button. The data is validated; all fields require an entry, even if it is only a zero. The system will provide a message, stating what is missing or in error. Clicking okay on the message moves the cursor to the appropriate field for editing.



After a site has been completed and saved, it will no longer show up on the site list add page, but will be moved to the Edit page. Selecting the “Edit” radio button at the top of the site list page will open the Edit page. This will only bring up MAP Assignments that have not been uploaded. From here the user can select what one they would like to edit and then click the “Modify” button. This will open the record back up with all data that was input. Now the user can navigate through the information using the right and left arrows and editing any information they need to. Once done, clicking the save button will save the changed information.

E. Uploading completed MAP surveys from MAP PDA:

This option is found by going to Menu -> Send Finished MAP Survey(s). From here the user can choose to show only unsent, sent or both surveys. With the PDA in the cradle and connected to a computer, the user can now upload their finished MAP surveys by clicking the “Send” button. If the “Clear Sent Items” box is checked, it will clear out the items that are sent.

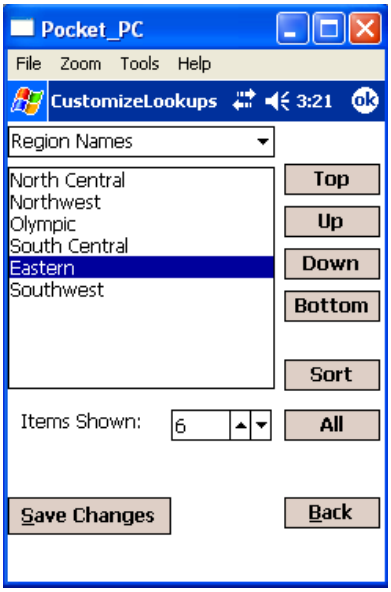


F. Other items of interest, but rarely used

Customizing Lookups

This form is found from Menu -> Setup -> Customize Lookups. From here the user is able to filter the State Routes, Canned Comments and Region Names.

The user can select how many items they would like to work with and move them to the order they would like. The "Sort" button will put the options back in the original order. Saving will save the options in the order the user selected.



Web Service Location

This option is found under Menu -> Setup -> Webservice location. YOU WILL NOT NEED TO USE THIS. Should there be problems with the PDA, see your MAP coordinator.

Deleting the Database:

Again, you will not need to use this. If used, the program will delete the database and then rebuild a new one. Everything that has been entered, but not uploaded, will be lost. DO NOT USE THIS. After rebuilding the database, the program will have to be restarted and the user will have to create a new user once again.

Questions? Comments? Problems? Call Anna Zaharris at 360-705-7813.